

AMENDMENT TO THE CLAIMS

1. (withdrawn) A sieve comprising:
 - a base;
 - a sieve screen frame mounted on the base;
 - a sieve screen mounted in the frame;
 - a vibrator arranged to vibrate the frame relative to the base;
 - a guide member above the sieve screen for controlling flow of material to be sieved over the sieve screen; and
 - an excitation source arranged to vibrate the guide member so as to induce a debinding excitation of the sieve screen.
2. (withdrawn) A sieve in accordance with Claim 1, wherein the excitation source is attached to the guide member.
3. (withdrawn) A sieve in accordance with Claim 1, wherein the sieve screen frame and sieve screen are circular.
4. (withdrawn) A sieve in accordance with Claim 2, wherein the guide member takes the form of a spiral-like curve having a progressively increasing radius of curvature and extending through at least 270°.
5. (withdrawn) A sieve in accordance with Claim 1, wherein the sieve screen frame and sieve screen are rectangular.
6. (withdrawn) A sieve in accordance with Claim 5, wherein the guide member is a single zig-zag-shaped rod having at least one aperture above the sieve screen through which material to be sieved can flow.
7. (withdrawn) A sieve in accordance with Claim 1, having a plurality of said guide members, each having a respective said excitation source.

8. (withdrawn) A sieve in accordance with Claim 1, wherein the guide member is secured to the top surface of the sieve screen.

9. (withdrawn) A sieve in accordance with Claim 1, wherein the guide member is in contact with the top surface of the sieve screen.

10. (withdrawn) A sieve in accordance with Claim 1 particularly for sieving a liquid material, wherein the guide member is spaced from the top surface of the sieve screen and the deblinding excitation is transmitted to the sieve screen through said liquid material.

11. (withdrawn) A sieve comprising:

- a base;

- a circular sieve screen frame mounted on the base;

- a circular sieve screen mounted in the frame and having a centre;

- a vibrator arranged to vibrate the frame relative to the base;

- a resonator secured to or contacting the sieve screen, wherein the resonator takes the form of a spiral-like curve starting at or near the centre of the sieve screen, the curve having a progressively increasing radius of curvature and extending through at least 270° about said centre; and

- an excitation source arranged to excite the resonator, to induce a deblinding excitation of the sieve screen.

12. (withdrawn) A sieve in accordance with Claim 1, wherein the excitation source comprises a pneumatic actuator.

13. (withdrawn) A sieve in accordance with Claim 1, wherein the excitation source comprises an electrically powered actuator.

14. (withdrawn) A sieve in accordance with Claim 1, wherein the excitation source provides ultrasonic excitation.

15. (currently amended) A sieve comprising:

- a base;
- a circular sieve screen frame mounted on the base;
- a circular separator screen mounted in the frame;
- a vibrator arranged to vibrate the frame relative to the base;
- a resonator secured to or contacting the separator screen, wherein the resonator comprises a rod extending between spaced ends;
- and an ultrasonic transducer at one of said spaced ends to excite the resonator rod at a resonant frequency having a predetermined wavelength along the length of the resonator rod;
- wherein said resonator rod having has at least a portion of its length which bends smoothly in a single direction of curvature through at least 90° and is formed as a spiral-like curve starting at or near the centre of the sieve screen, the curve having a progressively increasing radius of curvature and extending through at least 270° about said centre; and
- the rod having has a minimum radius of curvature at any every point between said spaced ends which
- is greater than said predetermined wavelength.

16. (original) A sieve in accordance with Claim 15, wherein said minimum radius of curvature is greater than 50 mm.

17. (original) A sieve in accordance with Claim 15, wherein said predetermined wavelength is between 25 mm and 35 mm.

18. (currently amended) A sieve in accordance with ~~any of Claims 15 to 17~~ Claim 15, wherein said rod bends in said single direction of curvature, over at least a portion thereof, by at least 180°.

19. (currently amended) A sieve in accordance with ~~any preceding claim~~ Claim 15, wherein the sieve further comprises a support frame beneath the sieve screen.

20. (currently amended) A sieve in accordance with Claim 19, wherein said ~~excitation source~~ ultrasonic transducer comprises a transducer driver, a resonator disc, and a support device, which supports the ~~excitation source~~ ultrasonic transducer on the support frame and also acts to minimise the excitation of said support frame.

21. (currently amended) A sieve in accordance with Claim 20, wherein an additional support device for the resonator rod is provided at a node and is attached to the resonator rod such that excitation of the support frame is minimized.

22. (currently amended) A sieve in accordance with ~~any of Claims 15 to 24~~ Claim 15 including a plurality of said resonator rods on a single said screen, each of said plurality of resonator rods having a respective ultrasonic transducer at one end of the rod.

23. (cancelled)

24. (withdrawn) A sieve in accordance with Claim 1, wherein the excitation source is not attached to the guide member or resonator and has a striking surface arranged to strike the guide member or resonator when the excitation source is energized.

25. (withdrawn) A sieve in accordance with Claim 1, wherein the excitation source is not attached to the guide member or resonator and has a contact surface arranged to apply pressure to the guide member or resonator to communicate vibrations to the guide member or resonator when the excitation source is energized.

26. (withdrawn) A sieve in accordance with Claim 1, wherein the excitation source is parasitic, depending on the vibration of the frame produced by said vibrator.

27. (cancelled).